

1     **Claims**

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3     1.    An underwater pool light comprising:  
4           a housing;  
5           a lens sealingly fixed to the housing;  
6           a light source located within the housing;  
7           mounting means for mounting the housing to a  
8    niche within or on a wall of a pool, wherein:  
9           the housing includes an integral connector for  
10   external connection to an electrical supply cable,  
11   and  
12           the pool light includes electrical connection  
13   means within the housing connecting the light source  
14   to the integral connector.

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16   2.    An underwater pool light as claimed in Claim 1,  
17   wherein the connector is wet mateable.

18

19   3.    An underwater pool light as claimed in Claim 1  
20   or 2, wherein the connector includes a cable  
21   receiving recess, and wherein the recess has a keyed  
22   portion which is complementary to a keyed portion  
23   provided at the cable.

24

25   4.    An underwater pool light as claimed in any  
26   preceding claim, wherein the connector comprises one  
27   or more pins projecting externally from the housing  
28   and adapted to engage with one or more corresponding  
29   sockets on the cable.

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31   5.    An underwater pool light as claimed in Claim 4,  
32   wherein the connector further comprises one or more

1 sleeves projecting externally from the housing and  
2 at least partially surrounding the one or more pins.

3

4 6. An underwater pool light as claimed in Claim 5,  
5 wherein the or each sleeve is made of plastic or  
6 rubber.

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8 7. An underwater pool light as claimed in any  
9 preceding claim, wherein the mounting means  
10 comprises a component of the housing adapted to  
11 slideably engage with a component of the niche, such  
12 that the distance between the housing and the niche  
13 is selectively adjustable.

14

15 8. An underwater pool light as claimed in Claim 7,  
16 further including clamping means for clamping the  
17 component of the housing relative to the component  
18 of the niche.

19

20 9. An underwater pool light as claimed in Claim 8,  
21 wherein the clamping means comprises at least one  
22 screw fastener.

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24 10. An underwater pool light as claimed in any of  
25 Claims 7 to 9, wherein the mounting means is adapted  
26 such that the distance between the housing and the  
27 niche is infinitely adjustable over the adjustment  
28 length.

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30 11. An underwater pool light as claimed in any of  
31 Claims 7 to 10, wherein the component of the housing  
32 comprises one or more protrusions provided at the

1 housing and the component of the niche comprises one  
2 or more slots provided at the niche.

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4 12. An underwater pool light as claimed in any of  
5 Claims 7 to 11, including a lens, and wherein the  
6 component of the housing is provided at a lens  
7 holding member.

8

9 13. An underwater pool light as claimed in Claim  
10 12, wherein the housing includes one or more cam  
11 receiving slots, and wherein the lens includes one  
12 or more cammed members for pivotally locating the  
13 lens relative to the lens holding member.

14

15 14. An underwater pool light as claimed in Claim 12  
16 or 13, wherein the lens includes fastener locating  
17 means and a fastener for fastening the lens to the  
18 lens holding member.

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20 15. An underwater pool light as claimed in Claim  
21 14, wherein the fastener locating means comprises a  
22 hollow coned protrusion for aligning the lens to a  
23 fastener receiving aperture provided at the lens  
24 holding member.

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26 16. An underwater pool light as claimed in any  
27 preceding claim, wherein the housing includes a  
28 collar projecting from a face of the housing.

29

30 17. An underwater pool light as claimed in any  
31 preceding claim, wherein the housing includes a lamp

1 enclosure which is sealably connected to the lens by  
2 a plurality of fasteners.

3

4 18. An underwater pool light as claimed in Claim  
5 14, wherein the housing includes a trim guard which  
6 covers the fasteners to prevent unfastening of the  
7 fasteners.

8

9 19. An underwater pool light as claimed in any  
10 preceding claim, wherein the housing includes two or  
11 more openings for allowing the flow of water into  
12 and out of the niche.

13

14 20. An underwater pool light as claimed in Claim  
15 19, wherein the openings comprise a number of cut-  
16 outs or castellations provided at the perimeter of  
17 the lens.

18

19 21. An underwater pool light as claimed in any  
20 preceding claim, wherein the niche includes one or  
21 more brackets for receiving one or more fastening  
22 rods.

23

24 22. An underwater pool light as claimed in Claim  
25 21, wherein the or each bracket is adapted to  
26 receive one or more fastening rods of a plurality of  
27 sizes.

28

29 23. An underwater pool light as claimed in Claim 21  
30 or 22, wherein the or each bracket is adapted to  
31 receive fastening rods oriented vertically,

1 horizontally, or obliquely relative to the base of  
2 the pool.

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4 24. An underwater pool light as claimed in any  
5 preceding claim, wherein the lens has a first  
6 portion adapted to direct light substantially normal  
7 to the wall of the pool, and a second portion  
8 adapted to direct light substantially parallel to  
9 the wall of the pool, and wherein the pool light  
10 further comprises:

11 a reflector located within the housing and  
12 having a first portion which is substantially  
13 parabolic in vertical cross section and a second  
14 portion which is adapted to reflect light  
15 substantially towards the second portion of the  
16 lens.

17

18 25. An underwater pool light as claimed in Claim  
19 24, wherein the second portion of the lens is  
20 provided at the internal surface of the lens.

21

22 26. An underwater pool light as claimed in Claim 24  
23 or 25, wherein the second portion of the lens  
24 comprises a plurality of Fresnel members adapted to  
25 direct light substantially parallel to the wall of  
26 the pool.

27

28 27. An underwater pool light as claimed in Claim  
29 26, wherein each Fresnel member is arcuate and  
30 substantially concentric about the light source.

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- 1     28. An underwater pool light as claimed in any of  
2     Claims 24 to 27, wherein the reflector includes a  
3     third portion which is adapted to reflect light  
4     substantially towards the second portion of the  
5     lens.  
6
- 7     29. An underwater pool light as claimed in any of  
8     Claims 24 to 28, further comprising a shading member  
9     adapted to inhibit the radiation of light in at  
10    least one direction.